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|--|-------------|-----------------------|---------------------|------------------|
| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/777,014   | 02/11/2004  | James A. Laugharn JR. | CVRS-P04-001        | 2221             |
| 28120  | 7590        | 01/16/2008            | EXAMINER            |                  |
| ROPEs & GRAY LLP<br>PATENT DOCKETING 39/41<br>ONE INTERNATIONAL PLACE<br>BOSTON, MA 02110-2624 |             |                       | SOOHOO, TONY GLEN   |                  |
| ART UNIT   |             | PAPER NUMBER          |                     |                  |
| 1797   |             |                       |                     |                  |
| MAIL DATE  |             | DELIVERY MODE         |                     |                  |
| 01/16/2008   |             | PAPER                 |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/777,014             | LAUGHARN ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Tony G. Soohoo         | 1797                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 31 October 2007.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 47-91, 141-145 and 148-162 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 47-91, 141-145, 148-16 are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

***The instant application claims are directed to an apparatus.***

1. The elements of a reaction vessel (broad) with an acoustic source (broad) (i.e. React Vessel, br; Acoustic, br) links species of the claims together.
2. However with there is no generic claim to this genus.
3. The claims present following disclosed patentably distinct species:

Note:

(br) – indicates a broad genus element

(sp) - indicates a specific species element

Notation of \*, \*\*, \*\*\* indicates (genus or species or sub-genus or sub-species chain, etc.)

**S1. SPECIES A (clm 47): A Reaction vessel and Acoustic Source with 100kz-100Mhz focal zone Less 2cm (\* React Vessel, br; \*\* Acoustic, sp; having field variables, sp, \*\* field focal size, sp; \*\* field frequency sp) ; SPECIFIC FREQUENCY AND FIELD SIZE REQUIREMENT (COMBINATION)**

**S2. SPECIES B (clm 141): A Reaction vessel and Sample vessel (), Acoustic Source (Acoustic, sp) with 100kz-100Mhz ( \* React Vessel, br; \* sample Vessel, br; \*\* Acoustic, sp; having field variables, sp; \*\* field frequency, sp); NO FIELD**

**SIZE REQUIREMENT; SPECIFIC REACTION VESSEL AND SAMPLE VESSEL  
COMBINATION REQUIREMENT**

**S3. SPECIES C** (clm 150): A CONDUIT vessel, Acoustic Source (Acoustic, sp) with a focal zone of 2 cm ( \*\* React Vessel, sp; \*\* Acoustic, sp; having field variables, \*\* focal zone size sp); NO FREQUENCY REQUIREMENT; SPECIFIC CONDUIT REACT VESSEL REQUIREMENT

**S4. SPECIES D:** (clm 157): A reaction vessel; Acoustic Source (Acoustic, sp) with a focal zone of 2 cm (\* React Vessel, br; \*\* Acoustic, sp; having field variables, \*\* focal zone size sp); NO FREQUENCY REQUIREMENT:

4. **No claim is found to be generic.** Species S2 and S4 are subcombination claims of the species S1.
5. Species S1 and S2 (field frequency, sp) claims particulars in distinction to that of species S3 and S4 for patentability.
6. Species S2 (field frequency, sp) claim particulars in distinction to that of species of S3 and S4 for patentability.
7. Species S3 (conduit vessel, sp) claim particulars in distinction of species S1, S2, S4 for patentability.

8. Species S2 (field frequency, sp) and S3 (field, size) are evidence claims of each other with that of species S1 which show a (S2,S3) claim of particulars in distinction of for patentability of species S1 (combination, frequency and size).

9. Election is required between the Species A-D, enumerated as S1-S4.

10. Also, an election of each (\*\*) sub-species, and subsequent (\*\*\*) sub-species of the (\*\*) sub-species

11. Subspecies under each subspecies has also been identified as follows:

**S1 (clm. 47) Species A:**

A reaction vessel (React Vessel, br) and Acoustic Source with 100kz-100Mhz focal zone Less 2cm (clm 47) (Acoustic, sp; having field variables, sp, field focal, sp; field frequency sp)

\* Species of reaction vessel to focal zone size (reaction vessel, sp) larger or smaller than 2cm (clm 48, 49)

\* Species with added element processor control (processor, br)

\*\* Sample flow processor (processor, sp) (clm 50)

\*\* Acoustic exposure (Acoustic, sp1,;processor sp1) (clm 51)

\*\* Acoustic frequency (Acoustic, sp2; processor sp2 (clm 52)

Species with added element feedback sensor (feedback, br) (clms 53-61)

- \*\* With feedback of state of sample (feedback, sp)
- \*\* With Sample flow processor (feedback, sp; processor, sp)
- \*\* Sense acoustic emissions (feedback, sp )
- \*\* Sense acoustic reflections (feedback, sp )
- \*\* Sense temperature (feedback, sp)
- \*\* Sense optical (feedback, sp)
- \*\* Sense optical spectral (61) (feedback, sp; optical br)
  - \*\*\* Excitation (feedback/optical, sp)
  - \*\*\* Absorption (feedback/optical, sp)
  - \*\*\* Fluorescence (feedback/optical, sp)
  - \*\*\* emission(feedback/optical, sp)

\* Species with sample or acoustic source positioning system (positioning, br; Acoustic, sp) (clms 63-65)

\* Species with the included sample material TO BE USED in the device of the APPRATUS CLAIMS (clm 66-81) (material, br)

- \*\* With organic material (material, sp)
- \*\* With inorganic material (material, sp)
- \*\* With mineral (material, sp)
- \*\* With biological (material, sp)

- \*\* With sample material (material, sp, sample br)
- \*\*\* With solvent/constituent (sample, sp)
- \*\*\* With 1<sup>st</sup> and 2<sup>nd</sup> molecules (sample, sp; molecule, br)
- \*\*\* With antibody binds, (sample, sp; molecule, sp)
- \*\*\* With substrate and ligand/constituent (substrate, br; sample, sp)
- \*\* With antibody, receptor, immobilizing surface
  - (substrate ,sp; sample, sp; molecule sp)
- \*\* With nucleic molecule and nucleic acid (sample, sp; molecule, sp)
- \*\* With molecule/ primer and molecule/substrate (sample, sp; molecule sp)

\* Species with the treatment INTENSION of the USE OF THE DEVICE  
(clm 80-87) (treatment, br)

- \*\* Use as fluidization (treatment, sp)
- \*\* Use as heating (treatment, sp)
- \*\* Use as disrupting (clm 82) (treatment, sp, disrupting, br)
  - \*\*\* With disrupting cellular membranes (clm 86)
- \*\* Use as intention to increase permeability (permeability, br)
  - \*\*\* With lessening barrier function (clm 87) (permeability, sp)
- \*\* Use as enhancing reaction (treatment, sp)
- \*\* With sterilization (treatment, sp)

\* Species with control for treatment interval and dead interval (acoustic sp)  
(clm 88-90).

\*\*With control of frequency or duty cycle (acoustic, sp)

\* Species with transfer of the reaction vessel (transfer, br)

**(clm 141) SPECIES B:** A reaction vessel (React Vessel, br) and sample vessel (sample Vessel, br) Acoustic Source (Acoustic, sp) with 100kz-100Mhz (clm 141) (Acoustic, sp; having field variables, sp; use frequency, sp)

\* Species with plural acoustic fields from plural transducers (Acoustic, sp)  
(clm 62)

\* Species with acoustic filed coupling medium (Acoustic, sp) (clm 142)

\* Species with a CONDUIT vessel (clm 143) (React Vessel, sp; conduit, br) (Evidence claim to claim 150)

\*\* with separate sample containers (conduit, sp; sample vessel, sp)

\* Species with acoustic source coupling medium (Acoustic, sp) (145)

\* Species with plural containers (sample vessel, sp) (clm 148)

\*\* with species of sample vessel containers of a micro titer plate, a  
blister pack, or array of polymeric bubbles (sample vessel, sp)

**(clm 150) SPECIES C: A CONDUIT vessel (React Vessel, sp) Acoustic  
Source (Acoustic, sp) with a focal zone of 2 cm (Acoustic, sp; having field  
variables, focal zone sp)**

\* Species with added processor, sample flow processor (Acoustic, sp,  
processor sp)

\* Species with added processor, acoustic exposure processor (Acoustic,  
sp, processor sp)

\* Species with added processor, frequency processor (Acoustic, sp,  
processor, sp)

\* Species with added element feedback sensor (feedback, br)

\*\* with feedback of state of sample (feedback, sp)

\* Species with the use and function of mixing with a constituent material  
(treatment, sp; material sp)

**(clm 157) SPECIES D:** A reaction vessel (React Vessel, br); Acoustic Source (Acoustic, sp) with a focal zone of 2 cm (Acoustic, sp; having field variables, focal zone size sp)

\* Species with added processor, sample flow processor (Acoustic, sp, processor sp)

\* Species with added processor, acoustic exposure processor (Acoustic, sp, processor sp)

\* Species with added processor, frequency processor (Acoustic, sp, processor, sp)

\* Species with added element feedback sensor (feedback, br)

\*\* with feedback of state of sample (feedback, sp)

12. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, sub-species, and subsequent species for examination even though this requirement is traversed.

13. Applicant is required to identify and name what element(s) applicant considers as the Genus of the invention.

14. Applicant is further required to identify any sub genus and sub species of the invention form the species presented above.

15. Applicant is further required to identify and admit which species, sub-species, and subsequent subspecies applicant considers as a subsequent, genus, sub-genus, and subsequent sub-genus.

16. Applicant is further required to identify which species, sub-species, and subsequent sub-species; and genus, sub-genus, and subsequent sub-genus applicant considers as obvious variants (of species, genus.. etc) which should be examined together are obvious over one another.

17. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

18. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

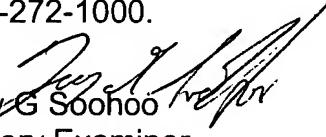
Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

19. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 8AM-5PM, Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tony G. Soohoo  
Primary Examiner  
Art Unit 1797